

WHAT IS CLAIMED IS:

1. A semiconductor light emitting device comprising at least one semiconductor light emitting element of edge-emission type, a first heat sink and a second heat sink,

5 wherein at least a part of an electrode for the first-conduction-type semiconductor of the semiconductor light emitting element is in contact with the first heat sink;

10 at least a part of an electrode for the second-conduction-type semiconductor of the semiconductor light emitting element is in contact with the second heat sink; and

15 the first heat sink and the second heat sink are in contact with each other in a junction overlooking one of the two side planes which do not compose the facets of the cavity in the semiconductor light emitting element.

2. The semiconductor light emitting device as claimed in Claim 1, wherein

20 a portion of the electrode for the first-conduction-type semiconductor of the semiconductor light emitting element is not in contact with the first heat sink in the vicinity of the front facet of the element; and

25 a portion of the electrode for the second-conduction-type semiconductor of the semiconductor light emitting element is in contact with the second heat sink in the vicinity of the front facet of the element.

3. The semiconductor light emitting device as claimed in Claim 1, wherein the surface of the first heat sink which is kept in contact with the semiconductor light emitting element has an effective electro-conductivity with at least one surface which is not kept in contact with the semiconductor light emitting element.

4. The semiconductor light emitting device as claimed in Claim 1, wherein a surface of the second heat sink which is kept in contact

with the semiconductor light emitting element has no electro-conductivity with any surface which is not kept in contact with the semiconductor light emitting element.

5 5. The semiconductor light emitting device as claimed in Claim 1, wherein

the diameter of a lead wire for introducing electric current to the semiconductor light emitting element and which is kept in contact with at least one of the group consisting of semiconductor 10 light emitting element, the first heat sink and the second heat sink is 35 μ m or less; and

a pair of portions not connected directly with each other are connected with each other with a plurality of lead wires.

15 6. The semiconductor light emitting device as claimed in Claim 1, wherein a space is provided in the vicinity of the junction of the first heat sink and the second heat sink, into which an adhesive used for joining the first heat sink and the second heat sink can flow to thereby prevent the adhesive from reaching the 20 semiconductor light emitting element.

7. The semiconductor light emitting device as claimed in Claim 1, wherein

25 at least a part of the electrode for the first-conduction-type semiconductor is in contact with the first heat sink, interposed with a first adhesive;

at least a part of the first heat sink is in contact with the second heat sink, interposed with a second adhesive; and

30 the total weight of the second adhesive is twice or more heavier than the total weight of the first adhesive.

8. The semiconductor light emitting device as claimed in Claim 7, wherein the total weight of the second adhesive is five times or more heavier than the total weight of the first adhesive.

9. The semiconductor light emitting device as claimed in Claim 1, wherein at least one of the electrodes of the semiconductor light emitting element has an Au layer having a thickness of 30 to 100
5 nm.

10. The semiconductor light emitting device as claimed in Claim 1, wherein the first conduction type is p-type, and the second conduction type is n-type.

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11. The semiconductor light emitting device as claimed in Claim 1, wherein the semiconductor light emitting element is a semiconductor laser diode, and the front facet thereof is connected to an optical fiber so as to compose a semiconductor laser module.

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12. The semiconductor light emitting device as claimed in Claim 11, wherein the tip of the optical fiber has a light condensation focusing function, and is processed so as to be optically coupled directly with the front facet of the semiconductor laser diode.

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